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10/804,619	03/19/2004	Jin Feng	306473.01	7852
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MICROSOFT CORPORATION ONE MICROSOFT WAY REDMOND, WA 98052-6399			EXAMINER ALVESTEFFER, STEPHEN D	
			ART UNIT	PAPER NUMBER
			2173	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/804,619	FENG ET AL.	
	Examiner	Art Unit	
	Stephen Alvesteffer	2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6-9,11,13,14,25-28 and 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6-9,11,13,14,25-28 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is responsive to the Request for Continued Examination (RCE) filed October 31, 2007. Claims 1, 6, 9, 11, 25, 26, 28, and 30 are amended. Claims 2-5, 10, 12, 15-24, and 29 are cancelled. Claims 1, 6, and 25 are independent claims. Claims 1, 6-9, 11, 13, 14, 25-28, and 30 remain pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-8, 11, 13, 14, 25-27, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Canon Kabushiki Kaisha (hereinafter Canon), European Patent Application number EP 1 205 843 A, and Walbeck et al. (hereinafter Walbeck), United States Patent number 7,310,670.

Regarding claim 6, Canon teaches a system for use with a printer comprising: a client that interfaces with an applications program having a print capability (see Canon paragraph [0009]; *"The user interface device may be used with stand-alone processor-controlled machines such as printers, copiers, scanners etc. or may be used where a number of processor-controlled machines are coupled to a network such as a local or wide area network"*, the processor-controlled machine can be a printer); a print server in communication with the client via a first asynchronous communications channel, the

print server controlling a printing of data communicated to said print server by the client, the data corresponding to a print request from the applications program (see Canon paragraph [0090]; *"the communications control apparatus 25 of the processor-controlled machine with which the user interface device 12 is communicating forms a server for the user interface device 12"*, the processor-controlled machine functions as the server; see also Canon paragraph [0009]; *"The user interface device may be used with stand-alone processor-controlled machines such as printers, copiers, scanners etc. or may be used where a number of processor-controlled machines are coupled to a network such as a local or wide area network"*, the processor-controlled machine can be a printer; see also Canon paragraph [0085]; *"the user interface application may, from time to time, receive messages from the network in relation to a job or function that the user has instructed a processor-controlled machine to carry out"*, this shows bi-directional asynchronous behavior, where the client listens for messages from the server, while the server also has a listener that awaits messages and requests from the client); and a user interface manager that communicates with the print server by means of a second asynchronous communications channel with the print server and further wherein the user interface manager responds to a user interface message sent from the print server to display information to a user (see Canon paragraph [0085]; *"the user interface application may, from time to time, receive messages from the network in relation to a job or function that the user has instructed a processor-controlled machine to carry out"*, this shows bi-directional asynchronous behavior, where the client listens for messages

from the server, while the server also has a listener that awaits messages and requests from the client).

Canon does not explicitly teach the second asynchronous communications channel being distinct from the first asynchronous communications channel. Walbeck teaches allocating separate asynchronous communications channels to facilitate the flow of data traffic (see Walbeck column 2 lines 10-28; *"Support for streaming data or asynchronous data is provided by allocating time slots on the network and allowing two intelligent nodes to talk directly to each other as arbitrated by the active network server. The active network server can also allocate separate data channels such that large amounts of data traffic can flow independently of the operations of the main network"*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to communicate asynchronous data in separate distinct communications channels in order to facilitate the flow of data between the client and server. Canon suggests separating the asynchronous data channels in paragraph [0079], *"data will be communicated through the filter stack and each filter will process any data received from another filter, the network or the user that is of the type the filter is designed to process so that the user interface is updated in accordance with data received from the network (such as status messages indicated that the printer is busy or the job has been completed) and instructions input by the user... the data writer may be arranged to supply any data of a type that is intended solely for transmission to the network directly to the network manager so that it does not have to pass through the filter stack"*, so that messages that might be displayed to the user are sent through one communications

channel to the filter stack, while messages that are not intended for display to the user are sent through a separate communications channel that does not go through the filter stack.

Regarding claim 7, Canon/Walbeck teaches a user display and wherein the message sent to the client user interface manager is a language neutral message that is interpreted by the user interface manager and converted to another representation for the user display (see Canon paragraph [0008]; *"This separation of the functionality of the processor-controlled machine from its user interface also facilitates adaptation of processor-controlled machines to meet 35 local requirements, for example to enable different language versions of a user interface to be provided for different language speaking countries while still providing a generic processor-controlled machine"*, the device descriptions are language neutral, that is, a generic format of device descriptions is transmitted that is interpreted by a plurality of different clients in a plurality of different ways).

Regarding claim 8, Canon/Walbeck teaches that the client user interface manager converts a globally unique identifier from the server to a user understandable message on said display (see Canon paragraph [0026]; *"The user interface application of the user interface device 12 then maps these functions on to possible user interface widgets each of which is associated with the program code necessary to generate the corresponding widget on the display screen"*, the resource identifiers must inherently be globally unique or the system would have no way to match the correct message with the identifier).

Regarding claim 11, Canon/Walbeck teaches that the user interface message is a language neutral message sent by the print server through the second asynchronous communications channel based on status of a print job being serviced by the print server (see Canon paragraph [0008]; *"This separation of the functionality of the processor-controlled machine from its user interface also facilitates adaptation of processor-controlled machines to meet 35 local requirements, for example to enable different language versions of a user interface to be provided for different language speaking countries while still providing a generic processor-controlled machine"*, the device descriptions are language neutral, that is, a generic format of device descriptions is transmitted that is interpreted by a plurality of different clients in a plurality of different ways; see also Canon paragraph [0028]; *"displaying information regarding the document to be printed and details of the manner of printing (the printer "job info")"*).

Regarding claim 13, Canon/Walbeck teaches that the user interface manager interprets the message and loads an executable component that responds to receipt of a said message based on the contents of said message (see Canon paragraph [0006]; *"The user interface device may generate the user interface itself from the device description or may be couplable to a separate user interface generator that generates the user interface from the device description and then supplies it to the user interface device"*).

Regarding claim 14, Canon/Walbeck teaches that the executable component accesses resources used by the executable component to display a message on a display monitor (see Canon paragraph [0006]; *"The user interface device may generate*

the user interface itself from the device description or may be couplable to a separate user interface generator that generates the user interface from the device description and then supplies it to the user interface device").

Regarding claim 25, Canon/Walbeck teaches a computer readable medium for use in client/server computing comprising instructions for: providing an interface for an application to communicate with a client which in turn communicates with a server, said interface enabling the application to call a service routine on the server by means of an asynchronous remote procedure call initiated by the application, the service routine operable to service a print request of the application, the asynchronous remote procedure call made over a first communications channel, wherein the server is a print server operable to service the print request (see Canon paragraph [0090]; *"the communications control apparatus 25 of the processor-controlled machine with which the user interface device 12 is communicating forms a server for the user interface device 12"*, the processor-controlled machine functions as the server; see also Canon paragraph [0009]; *"The user interface device may be used with stand-alone processor-controlled machines such as printers, copiers, scanners etc. or may be used where a number of processor-controlled machines are coupled to a network such as a local or wide area network"*, the processor-controlled machine can be a printer; see also Canon paragraph [0085]; *"the user interface application may, from time to time, receive messages from the network in relation to a job or function that the user has instructed a processor-controlled machine to carry out"*, this shows bi-directional asynchronous behavior, where the client listens for messages from the server, while the server also

has a listener that awaits messages and requests from the client); and responding to language neutral messages from the server sent over a second communications channel, the second communications channel being distinct from the first communications channel (see Walbeck column 2 lines 10-28; *"Support for streaming data or asynchronous data is provided by allocating time slots on the network and allowing two intelligent nodes to talk directly to each other as arbitrated by the active network server. The active network server can also allocate separate data channels such that large amounts of data traffic can flow independently of the operations of the main network"*), by interpreting the language neutral messages and presenting a display in response to receipt of said language neutral messages and presenting a display in response to receipt of said language neutral messages understandable by a user (see Canon paragraph [0008]; *"This separation of the functionality of the processor-controlled machine from its user interface also facilitates adaptation of processor-controlled machines to meet 35 local requirements, for example to enable different language versions of a user interface to be provided for different language speaking countries while still providing a generic processor-controlled machine"*, the device descriptions are language neutral, that is, a generic format of device descriptions is transmitted that is interpreted by a plurality of different clients in a plurality of different ways).

Regarding claim 26, Canon/Walbeck teaches that a client user interface manager interprets the language neutral messages by converting them into language specific messages understandable by the user (see Canon paragraph [0008]; *"This*

separation of the functionality of the processor-controlled machine from its user interface also facilitates adaptation of processor-controlled machines to meet 35 local requirements, for example to enable different language versions of a user interface to be provided for different language speaking countries while still providing a generic processor-controlled machine", the device descriptions are language neutral, that is, a generic format of device descriptions is transmitted that is interpreted by a plurality of different clients in a plurality of different ways).

Regarding claim 27, Canon/Walbeck teaches that the server sends a globally unique identifier based on a status of said server and wherein the client converts said globally unique identifier to a user understandable message (see Canon paragraph [0026]; *"The user interface application of the user interface device 12 then maps these functions on to possible user interface widgets each of which is associated with the program code necessary to generate the corresponding widget on the display screen"*, the resource identifiers must inherently be globally unique or the system would have no way to match the correct message with the identifier)..

Regarding claim 30, Canon/Walbeck teaches that the user interface manager accesses an executable component upon receipt of the language neutral messages from the server and wherein the executable component accesses resources used by the executable component to display a message (see Canon paragraph [0006]; *"The user interface device may generate the user interface itself from the device description or may be couplable to a separate user interface generator that generates the user interface from the device description and then supplies it to the user interface device"*)).

Claims 1, 9, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Canon (EP 1 205 843 A) *supra*, Walbeck (7,310,670) *supra*, and Kageyama et al. (hereinafter Kageyama), United States Patent number 5,625,757.

Regarding claim 1, Canon/Walbeck teaches a system for use in client/server computing comprising: a client that interfaces with an applications program (see Canon paragraph [0104]; *"the user interface device may be a personal digital assistant that, in addition to the user interface application includes other applications or programs such as, for example, word processing, spreadsheet, calendar, diary and other similar applications"*, the user interface device is equivalent to the client, the user interface application is equivalent to the applications program); a server in communication with the client that responds to a request from the applications program communicated to the server by the client for services available through said server (see Canon paragraph [0009]; *"The user interface device may be used with stand-alone processor-controlled machines such as printers, copiers, scanners etc. or may be used where a number of processor-controlled machines are coupled to a network such as a local or wide area network. In this case, the user interface device may communicate with a processor controlled machine either directly or via the network"*), wherein the server is a print server operable to service print requests from one or more client computers (see Canon paragraph [0090]; *"the communications control apparatus 25 of the processor-controlled machine with which the user interface device 12 is communicating forms a server for the user interface device 12"*, the processor-controlled machine functions as the server;

see also Canon paragraph [0009]; *"The user interface device may be used with stand-alone processor-controlled machines such as printers, copiers, scanners etc. or may be used where a number of processor-controlled machines are coupled to a network such as a local or wide area network"*, the processor-controlled machine can be a printer), wherein the print requests are communicated via a first asynchronous communications channel established between the client print spooler and the server print spooler (see Canon paragraph [0079]; *"data will be communicated through the filter stack and each filter will process any data received from another filter, the network or the user that is of the type the filter is designed to process so that the user interface is updated in accordance with data received from the network (such as status messages indicated that the printer is busy or the job has been completed) and instructions input by the user... the data writer may be arranged to supply any data of a type that is intended solely for transmission to the network directly to the network manager so that it does not have to pass through the filter stack"*, messages that might be displayed to the user are sent through one communications channel to the filter stack. Data that are intended solely for transmission, such as print spooler data, would be sent through another communications channel that does not go through the filter stack; See also Canon paragraph [0085]; *"the user interface application may, from time to time, receive messages from the network in relation to a job or function that the user has instructed a processor-controlled machine to carry out"*, this shows bi-directional asynchronous behavior, where the client listens for messages from the server, while the server also has a listener that awaits messages and requests from the client); and a user interface

manager that receives a user interface message from the server by means of a second asynchronous communications channel established between the server and the client (see also Canon paragraph [0085]; *"the user interface application may, from time to time, receive messages from the network in relation to a job or function that the user has instructed a processor-controlled machine to carry out"*, this shows bi-directional asynchronous behavior, where the client listens for messages from the server, while the server also has a listener that awaits messages and requests from the client), the second asynchronous communications channel being distinct from the first asynchronous communications channel (see Walbeck column 2 lines 10-28; *"Support for streaming data or asynchronous data is provided by allocating time slots on the network and allowing two intelligent nodes to talk directly to each other as arbitrated by the active network server. The active network server can also allocate separate data channels such that large amounts of data traffic can flow independently of the operations of the main network"*), wherein the user interface message is language neutral, and wherein the user interface manager includes a custom message interpreter operable to convert the language neutral message into a language specific message, and wherein the language specific message is displayed to a user via the client (see Canon paragraph [0008]; *"This separation of the functionality of the processor-controlled machine from its user interface also facilitates adaptation of processor-controlled machines to meet 35 local requirements, for example to enable different language versions of a user interface to be provided for different language speaking countries while still providing a generic processor-controlled machine"*, the device

descriptions are language neutral, that is, a generic format of device descriptions is transmitted that is interpreted by a plurality of different clients in a plurality of different ways).

Canon/Walbeck does not explicitly disclose a "client print spooler" or a "server print spooler". However, the use of print spoolers in a client/server printing environment was well known in the art at the time the invention was made (see Kageyama Figure 3 and column 16 lines 35-41; *"The printing system comprises: the WS (11) and PCs (12 and 13) provided as clients; a print server 300 having therein the print/spooler control servers (15, 16) and distributed printing management server 14 shown in FIG. 1; the network printer 1A which is directly connected to the LAN; printers 17, 18-1, and 18-2 which are connected to the print server 300; and the network 10"*). Canon teaches the use of a printer connected to a client/server environment (see Canon paragraph [0009]; *"The user interface device may be used with stand-alone processor-controlled machines such as printers, copiers, scanners etc. or may be used where a number of processor-controlled machines are coupled to a network such as a local or wide area network. In this case, the user interface device may communicate with a processor controlled machine either directly or via the network"*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide print spooling as taught by Kageyama in the client/server printing environment taught by Canon/Walbeck so that changes made to a document while it is being printed will not interrupt the printing process.

Regarding claim 9, Canon/Walbeck/Kageyama teaches a print spooler residing on the client and wherein print spooler receives data from the applications program for transmission to the print server via the first asynchronous communications channel and also wherein the print server communicates a message to the user interface manager via the second asynchronous communications channel upon receipt of the print request from the application program (see Kageyama Figure 3 and column 16 lines 35-41; *"The printing system comprises: the WS (11) and PCs (12 and 13) provided as clients; a print server 300 having therein the print/spooler control servers (15, 16) and distributed printing management server 14 shown in FIG. 1; the network printer 1A which is directly connected to the LAN; printers 17, 18-1, and 18-2 which are connected to the print server 300; and the network 10"*; see also Canon paragraph [0079]; *"the data writer may be arranged to supply any data of a type that is intended solely for transmission to the network directly to the network manager so that it does not have to pass through the filter stack"*, messages that might be displayed to the user are sent through one communications channel to the filter stack. Data that are intended solely for transmission, such as print spooler data, would be sent through another communications channel that does not go through the filter stack; See also Canon paragraph [0085]; *"the user interface application may, from time to time, receive messages from the network in relation to a job or function that the user has instructed a processor-controlled machine to carry out"*, this shows bi-directional asynchronous behavior, where the client listens for messages from the server, while the server also has a listener that awaits messages and requests from the client).

Regarding claim 28, Canon/Walbeck/Kageyama teaches that the client comprises a print spooler residing on a client computer and wherein the print spooler receives data from the application from transmission via the first communications channel to the server and also wherein the print server communicates a message to a user interface manager via the second communications channel upon receipt of the print request from the application (see Kageyama Figure 3 and column 16 lines 35-41; *"The printing system comprises: the WS (11) and PCs (12 and 13) provided as clients; a print server 300 having therein the print/spooler control servers (15, 16) and distributed printing management server 14 shown in FIG. 1; the network printer 1A which is directly connected to the LAN; printers 17, 18-1, and 18-2 which are connected to the print server 300; and the network 10"*; see also Canon paragraph [0079]; *"the data writer may be arranged to supply any data of a type that is intended solely for transmission to the network directly to the network manager so that it does not have to pass through the filter stack"*, messages that might be displayed to the user are sent through one communications channel to the filter stack. Data that are intended solely for transmission, such as print spooler data, would be sent through another communications channel that does not go through the filter stack; See also Canon paragraph [0085]; *"the user interface application may, from time to time, receive messages from the network in relation to a job or function that the user has instructed a processor-controlled machine to carry out"*, this shows bi-directional asynchronous behavior, where the client listens for messages from the server, while the server also has a listener that awaits messages and requests from the client).

Response to Arguments

Applicant's arguments with respect to claims 1, 6-9, 11, 13, 14, 25-28, and 30 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Alvesteffer whose telephone number is (571) 270-1295. The examiner can normally be reached on Monday-Friday 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on (571)272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/804,619
Art Unit: 2173

Page 17

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Stephen Alvesteffer
Examiner
Art Unit 2173



2-1-2008

TADESSE HAILU
PRIMARY EXAMINER

